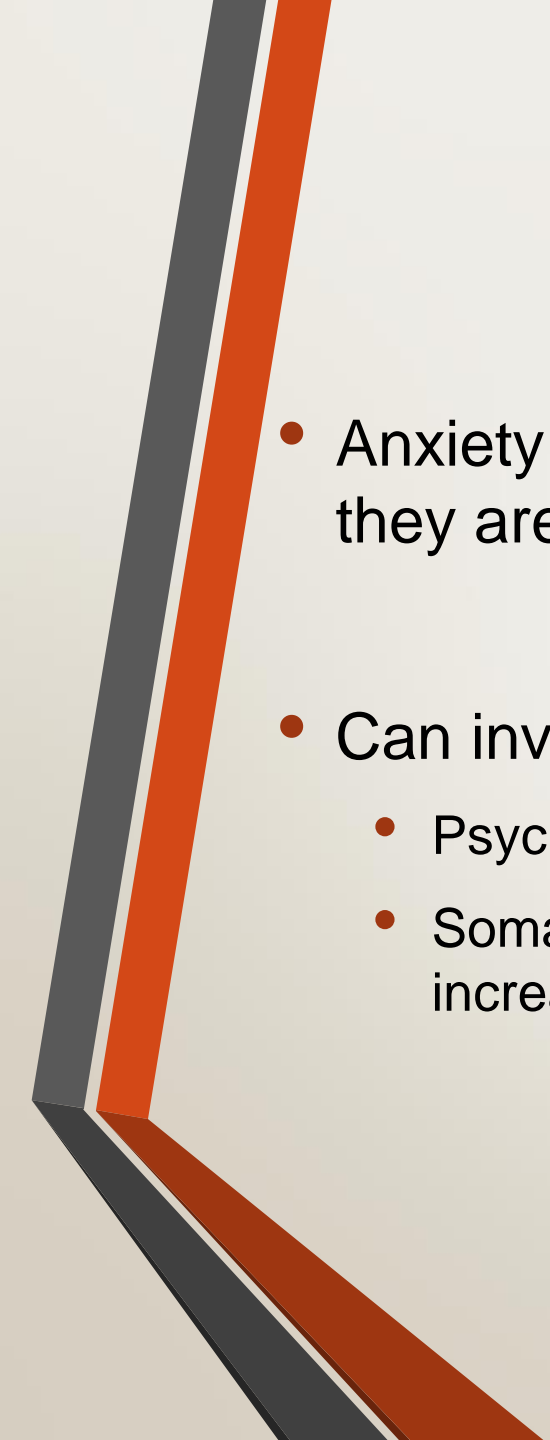
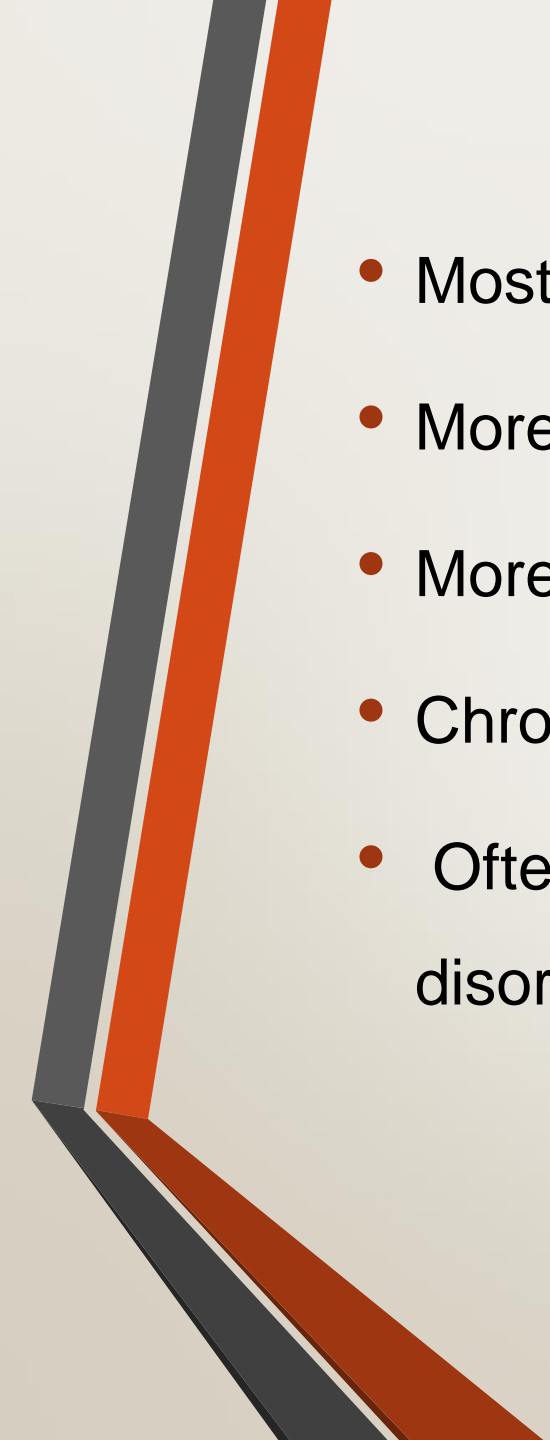




# Anxiety disorders

Dr. Lujain Al thagafi

- 
- Anxiety and/or panic attacks are the core symptoms of anxiety disorders , they are ( ego-dystonic ) and impairing .
  - Can involve both psychological and somatic complains .
    - Psychological : worry and fear
    - Somatic anxiety : restlessness ,gastrointestinal complains , headache , muscle aches , increase heart rate and respiration .

- 
- Most prevalent psychiatric disorders.
  - More frequent in women .
  - More likely to develop at an early age .
  - Chronic with symptoms intensity waxing and waning over time
  - Often comorbid both with other anxiety diagnoses and with other disorder groups (e.g. Mood disorders, psychoses)

# Neurological

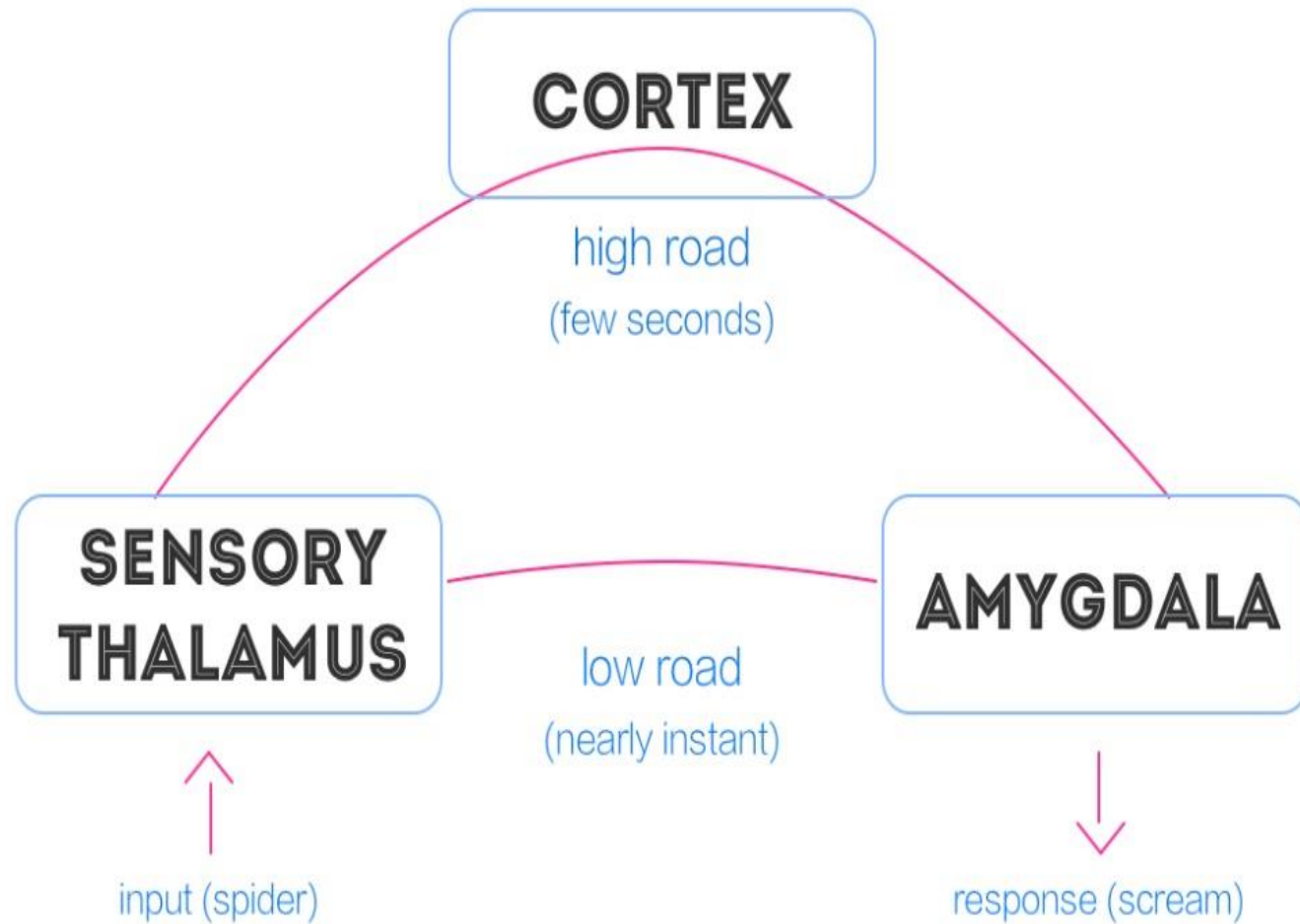
- Limbic system(thalamus, amygdala) and locus coeruleus are implicated in the manifestations of GAD, PTSD, and panic disorder .
- The amygdala coordinates fear behaviors and responses, and the locus coeruleus releases norepinephrine.
- Over all the limbic system scans the environment for danger( limbic alert) .

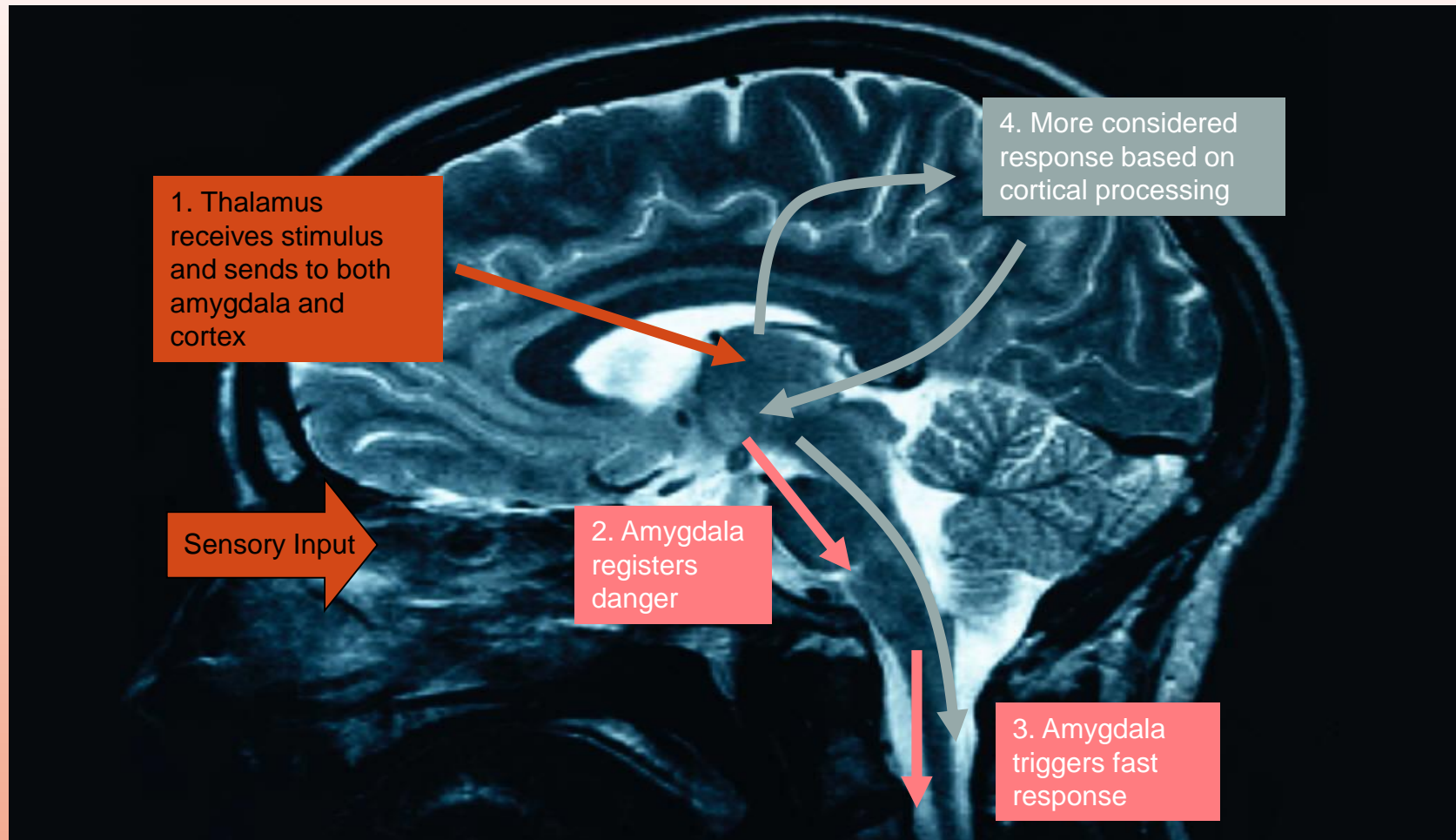
# Locus coeruleus

- is a nucleus in the pons (part of the brainstem) involved with physiological responses to stress and panic.
- The locus coeruleus is the principal site for brain synthesis of norepinephrine (noradrenaline).

# HOW THE BRAIN PROCESSES FEAR

(the high and low road)



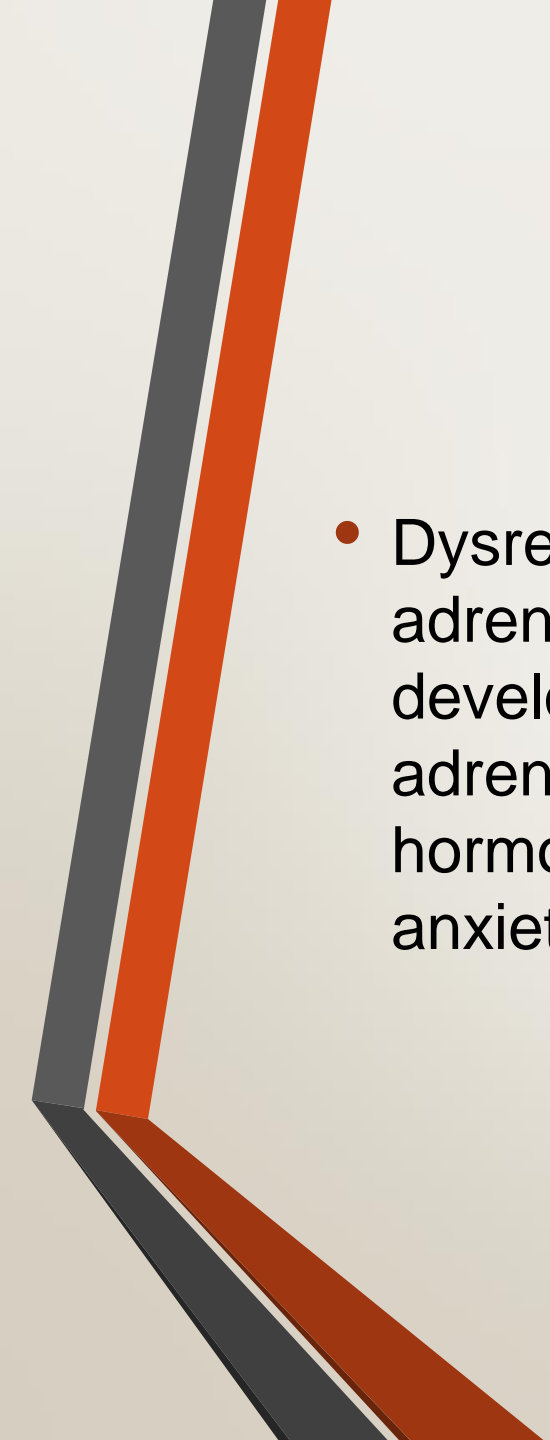


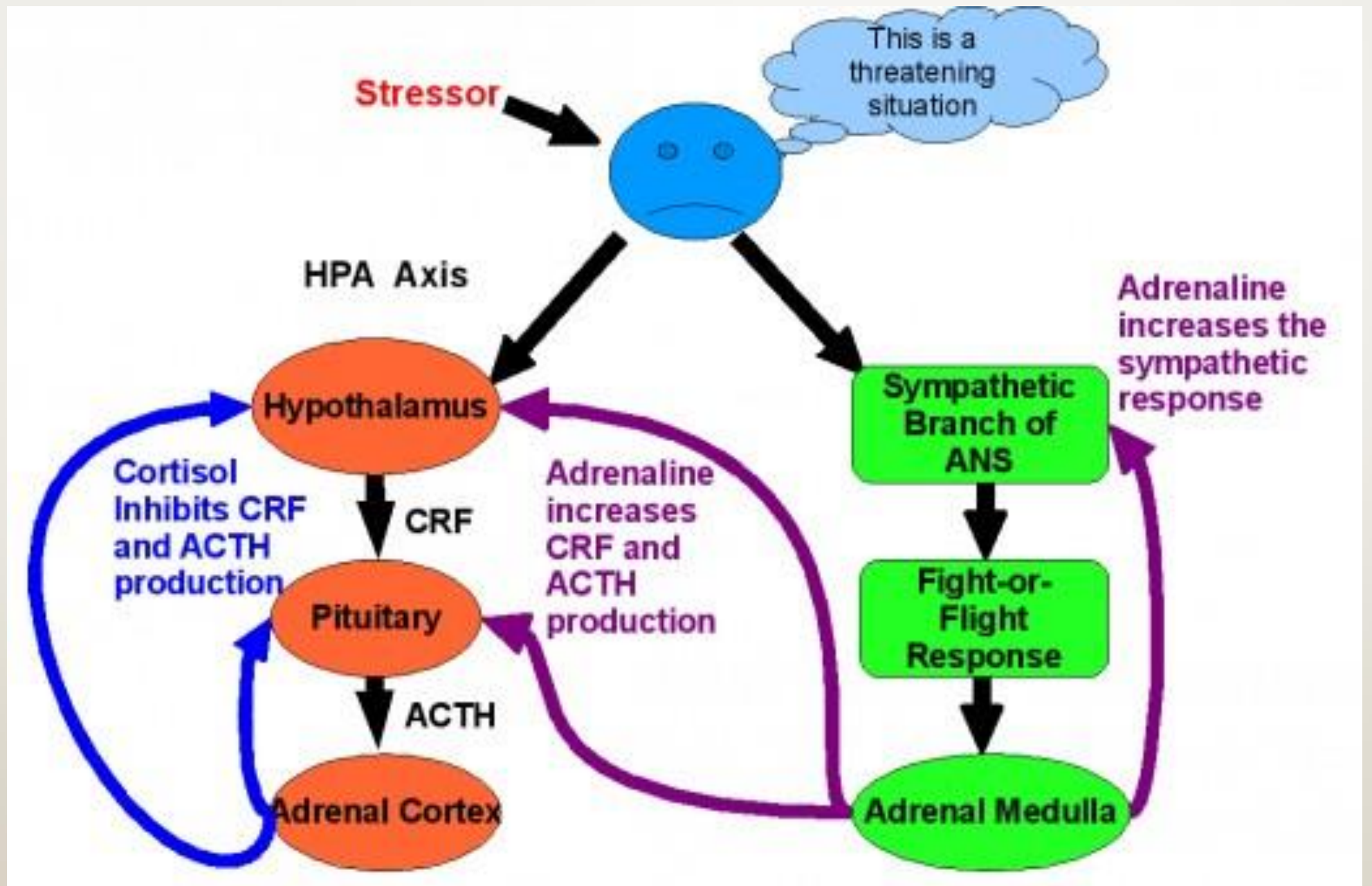
- Parts of the brain involved in fear response = thalamus, amygdala, hypothalamus, which then instruct the endocrine glands and autonomic nerv.sys.
- Evolved fear module (pink) versus considered response (green) = “fight or flight” versus “feel the fear and do it anyway (or do it differently)”!

# Biochemical formulations

- Serotonin(5-HT) and norepinephrine(NE) are important neurotransmitters in the pathophysiology of anxiety disorders.
- Serotonin is decreased .
- Norepinephrine is released in the fight or flight response .



- 
- Dysregulation of corticotropin-releasing factor from hypothalamus and adrenocorticotrophic hormone from the pituitary are implicated in the development of anxiety disorders as part of the hypothalamic-pituitary-adrenal axis (HPA) as a result excessive secretion of cortisol ( stress hormone)from adrenal glands in response to ( ACTH) can increase anxiety symptoms.





# Infectious etiologies

- Streptococcal bacterial infection may lead to the development of OCD

# GENETICS

- Individuals with close relatives with anxiety disorder are at increased risk of developing anxiety disorders .



# Psychoanalytical formulation

- Anxiety is related to unresolved unconscious conflicts or separation from a love object .
- Panic disorder represents an unsuccessful attempt to defend against anxiety-producing impulses.

# Psychosocial formulation

- Panic disorder represents learned response of classical conditioning from repeated exposure to anxiety-provoking situation .

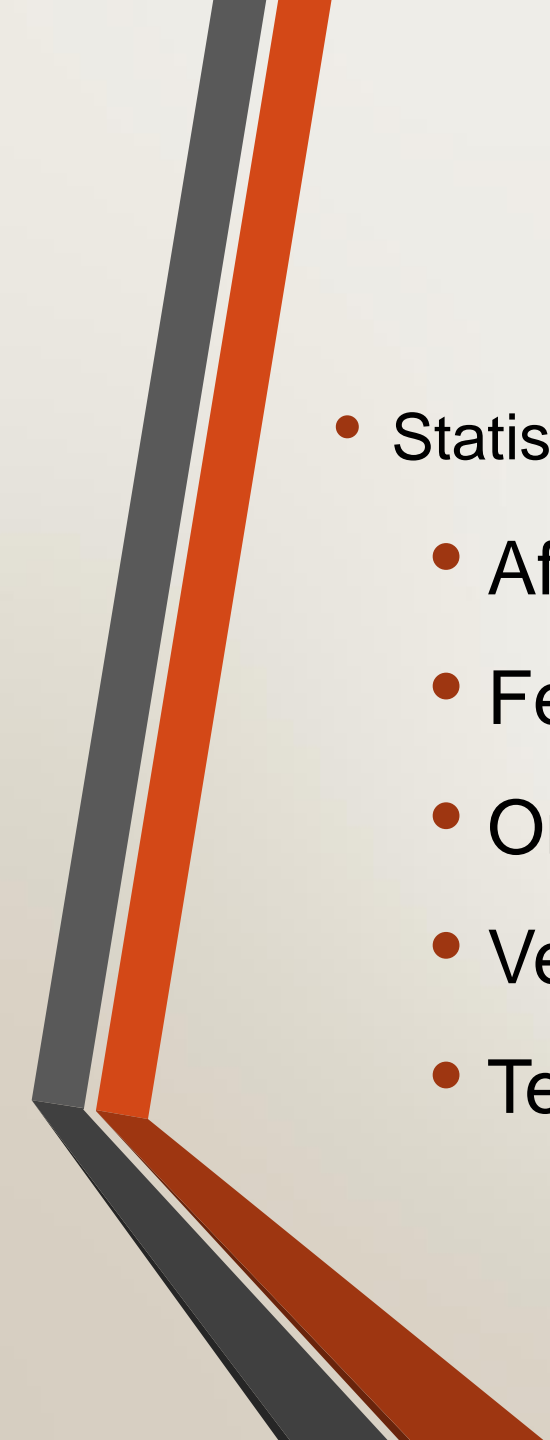
# Generalized Anxiety Disorder – DSM IV TR

- Excessive anxiety and worry about a **number of events or activities**, occurring more days than not for at least **6 months**
- Difficult to **control** the worry
- Associated with **three** of the following
  - Restlessness, difficulty concentrating, muscle tension, fatigue, sleep disturbances, irritability
- Not due to a substance, medical condition or other mental disorder
- Causes clinically significant distress or impairment in functioning

# Generalized Anxiety Disorder

- Chronic condition, usually lifelong
- Screening questions
  - Do others call you a worry person?
  - What kinds of things do you worry about?
- Usually seek treatment for somatic symptoms rather than anxiety
- Only 1/3 seek psychiatric treatment
- Often see specialists (GI, cardiology, internists)



- 
- Statistics
    - Affects about 5% of the general population
    - Females outnumber males approximately 2:1
    - Onset is often insidious, beginning in early adulthood
    - Very prevalent among the elderly
    - Tends to run in families

# GAD - treatment

- Pharmacotherapy:
  - 1<sup>st</sup> line SSRI or SNRI
  - 2<sup>nd</sup> line Benzodiazepine
    - Only recommended for short term use due to side effects (cognitive impairment, ataxia, sedation) and dependence and withdrawal)
    - Avoid in substance abuse and the elderly
  - 3<sup>rd</sup> line Adjunctive olanzapine or risperidone  
Mirtazapine

# GAD - treatment

- **Psychological treatment:**
- CBT as effective as medication (also 1<sup>st</sup> line)
- CBT involves:
  - Psychoeducation
  - Cognitive interventions (addressing cognitive distortions, unrealistic beliefs)
  - Exposure
  - Relaxation strategies
  - Problem Solving
  - Assertiveness training
  - Relapse Prevention



# Panic Attack

# Panic Attack

- A discrete period of intense fear or discomfort, in which 4 or more develop abruptly and reach a peak within ten minutes:
  - Palpitations, increased heart rate
  - Sweating
  - Tremor or shaking
  - Shortness of breath or smothering sensation
  - Feeling of choking
  - Chest pain
  - Nausea or abdominal distress
  - Feeling dizzy, lightheaded, or faint
  - Derealization
  - Depersonalization
  - Parasthesias
  - Chills or hot flushes
  - Fear of losing control or going crazy
  - Fear of dying



# Panic Disorder with or without agoraphobia



# agoraphobia

- Fear of being in places or situations where escape might be difficult or embarrassing, typically leading to avoidance of that place or situation.

# Panic Disorder with or without agoraphobia

- The person has experienced both :
  - **Recurrent, unexpected panic attacks**
  - **One or more of the attacks has been followed by either**
    - 1) Persistent concern about having another attack**
    - 2) Worry about the implications of the attack**
    - 3) Significant change in behaviour**
- The presence (or absence of agoraphobia)
- Not due to a substance, medication or medical condition
- Not better accounted for by another mental disorder



# Panic Disorder

- Initially, panic attacks are unexpected
- Can occur any time (even night)
- Can also develop panic attacks that have triggers (situationally-predisposed panic attacks)
- Patients begin to have anticipatory anxiety about having another panic attack
- This can lead to avoidance of situations where escape or help may not be readily available (agoraphobia)



## Facts and Statistics

- Affects about 3.5% of the general population
- Female to male ratio 2:1
- Onset is often acute, beginning between 17 and 35 years of age
- 75% of individuals with agoraphobia are female
- Highly comorbid with MDD (60%)

# Panic Disorder - Treatment

- Pharmacotherapy:
  - 1<sup>st</sup> line SSRI or SNRI
  - 2<sup>nd</sup> line Benzodiazepines
    - Only recommended for short term use due to side effects (cognitive impairment, ataxia, sedation) and dependence and withdrawal
    - Avoid in substance abuse and the elderly

\*\* Often clinically, a small dose of long acting benzodiazepine is started along with SSRI/SNRI to provide more immediate relief from distressing symptoms


i.e. 0.5 mg clonazepam BID for 2-3 weeks, then tapered until it is stopped

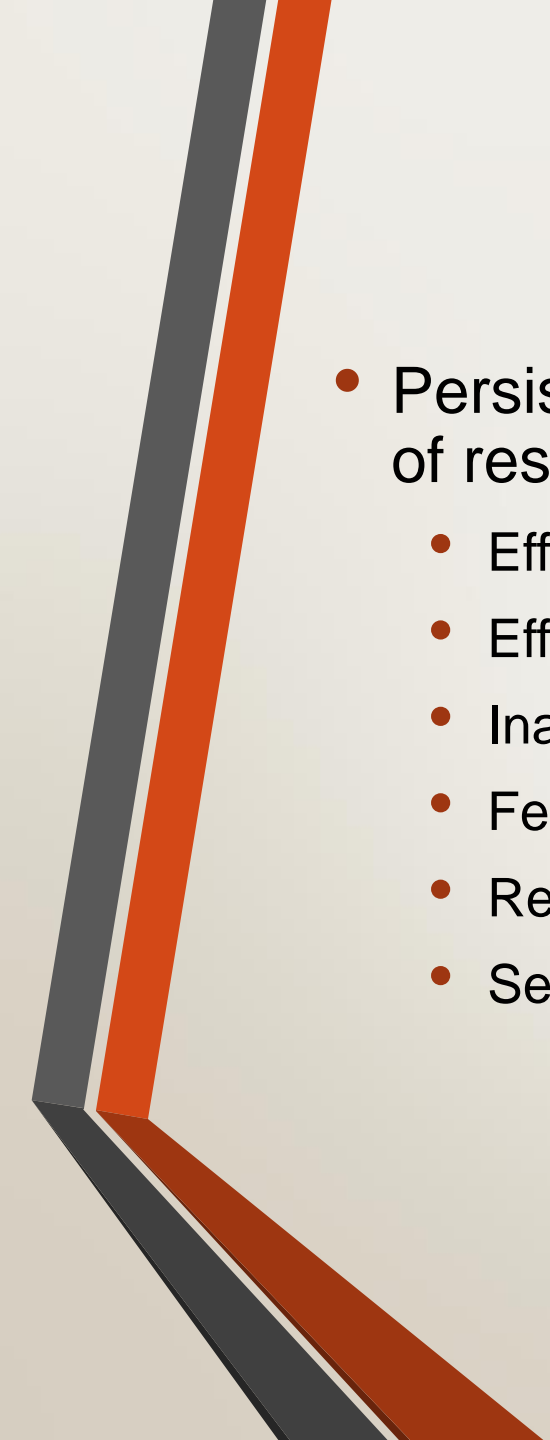
# Panic Disorder - Treatment


- Psychological treatment:
  - CBT most consistently efficacious psychotherapy for Panic Disorder, according to the literature
  - Individual or group therapy.
  - CBT for Panic Disorder includes same CBT concepts of psychoeducation, cognitive approaches, relaxation, problem solving
  - Also incorporates **interoceptive exposure** (exposure to feared symptoms → therapist may ask patient to hyperventilate or spin to make themselves dizzy)
  - Exposure to avoided situations is important



# Post traumatic Stress Disorder

- 
- The person has been exposed to a traumatic event which included both:
    - 1) The person experienced or witnessed an event involving actual or threatened death or serious injury, or a threat to personal integrity of self or others
    - 2) Response was fear, horror, or helplessness
  - The traumatic event is re-experienced including at least one of:
    - Distressing memories, dreams, acting or feeling as if event is recurring (illusions, dissociative flashbacks, hallucinations), intense psychological or physiological distress when exposed to cues that symbolize the trauma

- 
- Persistent avoiding of stimuli associated with the trauma and numbing of responsiveness including at least 3 of:
    - Efforts to avoid thoughts, feelings, conversations associated with the trauma
    - Efforts to avoid people, places and activities associated with the trauma
    - Inability to recall an important aspect of the trauma
    - Feeling of detachment or estrangement from others
    - Restricted range of affect
    - Sense of foreshortened future

- 
- Persistent symptoms of increased arousal including at least two of:
    - Difficulty falling or staying asleep
    - Irritability or outbursts of anger
    - Difficulty concentrating
    - Hypervigilance
    - Exaggerated startle reflex
  - Duration is more than 1 month
  - Causes clinically significant distress or impairment in functioning





# Post traumatic Stress Disorder

- Key features include exposure to trauma, re-experiencing of the trauma, avoidance and emotional numbing, and hyperarousal
- Examples of traumas include exposure to war, terrorist attacks, natural disasters, accidents involving serious injury or death, rape, torture
- If symptoms are present for less than one month, then the diagnosis may be Acute Stress Disorder



# Post traumatic Stress Disorder

- The Lifetime risk of exposure to trauma is 39%
- The lifetime risk of developing PTSD is 8 %
- Higher among women than men
- Lifetime prevalence estimates 16-37% in areas of the world where conflict has occurred
- Frequent co-morbidity with depression, substance abuse, other anxiety disorders



# Post traumatic Stress Disorder

- 6X increased risk of suicide attempts
- Predisposing factors include:
  - Childhood trauma
  - Inadequate support system
  - Female
  - Genetic vulnerability to psychiatric illness
  - Excessive alcohol use (recent)

# Post traumatic Stress Disorder - Treatment

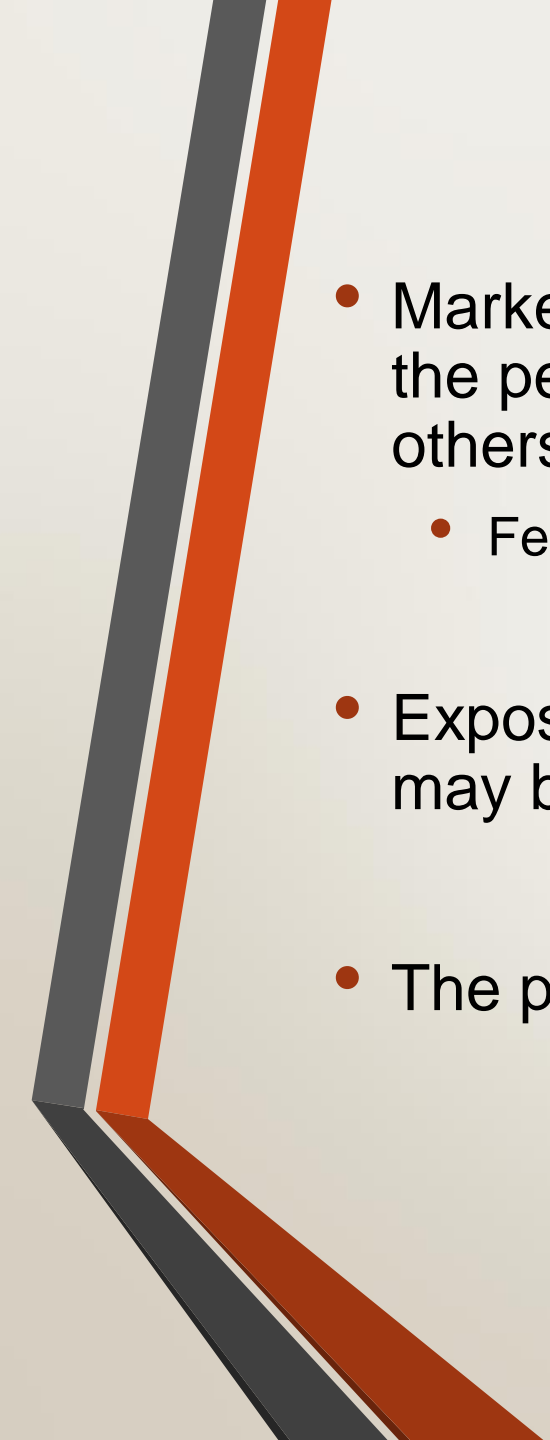
- Guidelines recommend SSRI/SNRI as first line treatment<sup>1</sup>
- Recommended that patients with PTSD should continue medication for at least 1 year<sup>1</sup>
- In practice, agents to help with insomnia are often added (i.e. Trazadone)

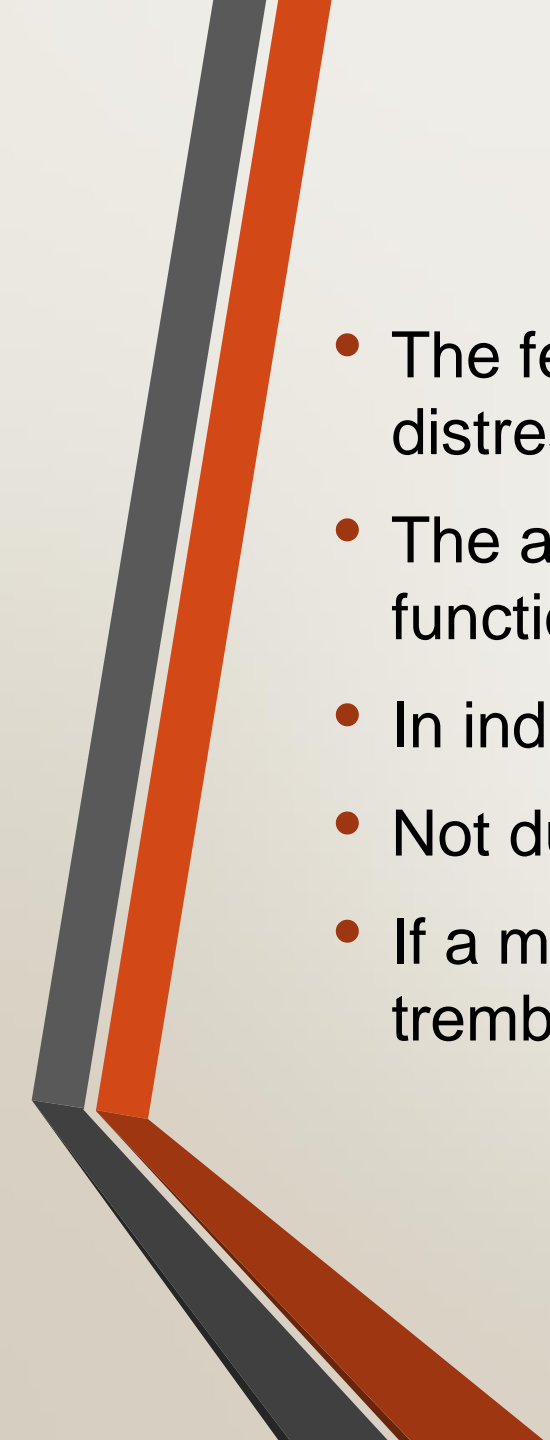
# Post traumatic Stress Disorder - Treatment

- Other meds sometimes used include:
  - Clonidine (antiadrenergic agent)
  - Prazosin for nightmares (alpha-1 adrenergic antagonist)
- Psychological treatment:
  - CBT recommended



# Social Anxiety Disorder (Social phobia)

- 
- Marked and persistent fear of social or performance situations in which the person is exposed to unfamiliar people or possible scrutiny by others
    - Fear that they will embarrass or humiliate themselves
  - Exposure to the feared situation invariably produces anxiety which may be in the form of a panic attack
  - The person recognizes that the fear is excessive or unreasonable

- 
- The feared situations are avoided or endured with intense anxiety and distress
  - The avoidance, anxious anticipation or distress interferes with functioning or causes marked distress
  - In individuals under 18, duration is at least 6 months
  - Not due to substance, medical condition or other mental disorder
  - If a medical condition is present, the fear is not related to it (i.e. trembling in Parkinson's)



# Social Phobia

- **Most people in the general population experience a degree of discomfort with certain social situations**
- **Generalized type vs. non-generalized** (a restricted number of situations i.e. public speaking)
- **Differentiate from panic disorder** (panic attacks in social phobia always occur in feared situations)
- **Differentiate from normal shyness** (shyness should not cause functional impairment or marked distress)

# Social Phobia

- Has significant impact on quality of life
- Lifetime prevalence of 8-12%<sup>1</sup> (one of the most common anxiety disorders)
- Early onset, usually in childhood
- Chronic course, usually 20 years or longer

# Social Phobia

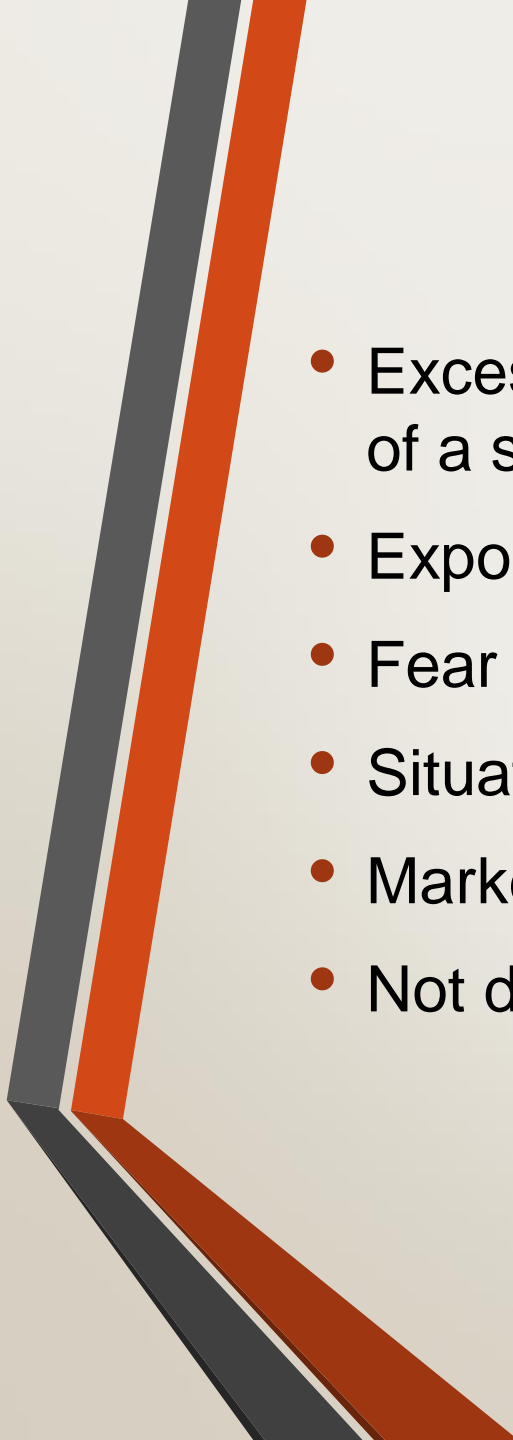
- Interferes with career, relationship, goals
- “illness of missed opportunities”
- Comorbid conditions include substance abuse, depression, or another anxiety disorder
- Key symptoms include blushing, sweating, palpitations, tremor and lightheadedness, panic attacks
- Situations are often avoided as an effort to alleviate distress

# Social Phobia - treatment

- Pharmacotherapy:
  - 1<sup>st</sup> line SSRI or SNRI
  - 2<sup>nd</sup> line Benzodiazepine
    - Only recommended for short term use due to side effects (cognitive impairment, ataxia, sedation) and dependence and withdrawal
    - Avoid in people with substance abuse and the elderly
  - 3<sup>rd</sup> line Adjunctive Abilify or Risperidone  
Mirtazapine, wellbutrin
- \*\* Although not in guidelines, in practice, beta blockers have been used with effect for non-generalized type performance anxiety




# Specific Phobia

- 
- Excessive or unreasonable fear cued by the presence or anticipation of a specific object or situation (insects, flying, heights, blood)
  - Exposure provokes an immediate anxiety response
  - Fear is recognized as excessive or unreasonable
  - Situation is avoided or endured with intense distress
  - Marked distress or interferes with functioning
  - Not due to a substance, medical condition or other mental disorder

# Specific Phobia

- Lifetime prevalence of 12%
- Most common mental disorder
- Begins at young age, 5-12 years old
- Treatment is exposure based therapy
- Graded exposure helpful



Anxiety disorder due to general medical condition



# Medical conditions that mimic or worsen anxiety symptoms

|                             |  |
|-----------------------------|--|
| <b>Endocrine conditions</b> | Hyperthyroidism<br>Hypothyroidism<br>Pheochromocytoma<br>Cushing's disease<br>Addison's disease<br>Menopause |
| <b>Cardiovascular</b>       | Acute Coronary Syndrome<br>Arrhythmia<br>CHF<br>Hypertension<br>Hypertension<br>Mitral Valve Prolapse        |

# Medical conditions that mimic or worsen anxiety symptoms (con't)

|                     |  |
|---------------------|--|
| <b>Neurological</b> | Epilepsy<br>Cerebrovascular disease<br>Meniere's disease<br>Multiple Sclerosis<br>Migraine<br>Encephalitis<br>Early dementia |
| <b>Metabolic</b>    | Porphyria<br>Diabetes  |
| <b>Pulmonary</b>    | Asthma<br>COPD<br>Pulmonary Embolism<br>Pneumonia  |

# Medical conditions that mimic or worsen anxiety symptoms (con't)

|                    |   |
|--------------------|---|
| <b>Other</b>       | Anemia<br>UTI (in elderly)<br>Irritable Bowel Syndrome<br>Heavy metal poisoning<br>B12 deficiency<br>Electrolyte disturbances                   |
| <b>Medications</b> | Anti-cholinergics<br>Steroids<br>Stimulants (methylphenidate and amphetamine based)<br>Theophylline<br>Ventolin<br>Nasal decongestants<br>SSRIs |



# Substance induced anxiety disorders

# Substance Abuse and Anxiety

- Substance abuse is often co-morbid with anxiety disorders as patients often try to self-medicate to cope with anxiety
- 37% of patients with GAD and 20-40% of patients with Panic Disorder have alcohol abuse/dependence
- Drug intoxication can mimic anxiety:
  - **Amphetamines**
  - **Caffeine**
  - **Nicotine**
  - **Cocaine**
  - **Phencyclidine**
  - **Marijuana**
  - **Hallucinogens**
  - **Ecstasy**
  - **Excessive alcohol consumption**

# Substance Abuse and Anxiety (con't)

- Drug withdrawal also associated with anxiety
  - Alcohol
  - Benzodiazepines
  - Opiate
  - Barbiturate
  - Anti-hypertensives



# Key features

|                       |  |
|-----------------------|--|
| <b>Panic Disorder</b> | <ul style="list-style-type: none"><li>• Fear of losing control, dying or going crazy</li><li>• Avoid situations in which attacks may occur</li></ul>   |
| <b>Agoraphobia</b>    | <ul style="list-style-type: none"><li>• Fear of situations from which escape may be difficult or help unavailable (crowds, bus, bridge etc.)</li></ul> |

# Key features

|                            |  |
|----------------------------|--|
| <b>Generalized Anxiety</b> | <ul style="list-style-type: none"><li>• Anxiety regarding a number of everyday events</li><li>• Future and uncertainty difficult to accept</li></ul> |
| <b>Social Anxiety</b>      | <ul style="list-style-type: none"><li>• Fear of humiliation, embarrassment or scrutiny by others</li></ul>   |
| <b>PTSD</b>                | <ul style="list-style-type: none"><li>• Re-experiencing of trauma through flashbacks, dreams, recollections</li></ul>                                |
| <b>Specific phobia</b>     | <ul style="list-style-type: none"><li>• Fear of a specific object, animal or situation</li></ul>   |



# Breathing Exercise

Slowly Inhale for 5 seconds

Hold it for 5 seconds

& Slowly Exhale for 5 seconds

Breathing exercises can help you cope with shortness of breath, along with other common anxiety and panic related symptoms, such as decreasing accelerated heart rate and relieving muscle tension. Additionally, diaphragmatic breathing exercises shifts focus towards the rhythm of your breath, clearing the mind of anxious, fearful, and negative thoughts.

[panicdisorder.about.com](http://panicdisorder.about.com)

You Are Not Alone

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Thank you